

SB
C1
16. (Twice Amended) A semiconductor structure comprising:

a semiconductor substrate; and

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an antireflective coating over the semiconductor substrate, the antireflective coating comprising a metal silicon nitride compound, the metal being at least one metal selected from the group consisting of Sc, Co, Al, and Ni, wherein the antireflective coating is configured to minimize reflectivity of deep ultraviolet light.

17. (Twice Amended) The semiconductor structure as defined in Claim 26, wherein the metal silicon nitride compound is selected from the group consisting of titanium tungsten silicon nitride, tungsten aluminum silicon nitride, and titanium aluminum silicon nitride.

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19. (Twice Amended) The semiconductor structure as defined in Claim 26, wherein $M_1M_{2(1-r)}$ is selected from the group consisting of Ti_rW_{1-r} , W_rAl_{1-r} , and Ti_rAl_{1-r} .

20. (Twice Amended) The semiconductor structure as defined in Claim 16, wherein:

the antireflective coating has a film thickness; and

the antireflective coating is amorphous or has a grain size that is less than the film thickness.

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21. (Once Amended) The semiconductor structure as defined in Claim 16, wherein the metal silicon nitride compound is $M_xSi_yN_z$, M is a metal, x is greater than zero, y is greater than 2x, and z is in a range from about 1y to about 5y.

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23. (Twice Amended) The semiconductor structure as defined in Claim 21, wherein the antireflective coating further comprises hemispherical grained polysilicon.

Sub C2
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26. (Twice Amended) A semiconductor structure comprising:

a semiconductor substrate; and

an antireflective coating upon said semiconductor substrate, the antireflective coating comprising a metal silicon nitride compound $M_xSi_yN_z$, wherein:

x is greater than zero;

y is greater than x;

z is greater than zero and less than about 5y;

M is at least two transition metals composed of $M_1M_{2(1-r)}$;

r is in a range from 0 to 1;

M1 and M2 are selected from the group consisting of Sc, Ti, Zr, Nb, Ta, Mo, W, Co, Al, and Ni; and

M1 is not M2.

28. (Twice Amended) The semiconductor structure as defined in Claim 26, wherein the antireflective coating further comprises hemispherical grained polysilicon.

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Sub C3
29. (Twice Amended) A semiconductor structure comprising:

an electrically insulative layer upon a semiconductor substrate;

a patterned electrically conductive metal line upon the electrically insulative layer; and

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ant.
an antireflective coating upon said electrically conductive metal line, wherein the antireflective coating is configured to minimize reflectivity of deep ultraviolet light, the antireflective coating comprising a metal silicon nitride compound $M_xSi_yN_z$, wherein:

x is greater than zero;

M is at least one transition metal selected from the group consisting of Sc, Co, Al, and Ni;

y is greater than x; and

z is greater than about 0 and less than about 5y.

31. (Twice Amended) The semiconductor structure as defined in Claim 29, wherein the antireflective coating further comprises hemispherical grained polysilicon.

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32. (Twice Amended) A semiconductor structure comprising:

a semiconductor substrate; and

an antireflective coating over the semiconductor substrate, the antireflective coating comprising a metal silicide compound, wherein the metal is at least one metal selected from the group consisting of Sc, Co, Al, and Ni.

33. (Once Amended) The semiconductor structure as defined in Claim 32, wherein:

the metal silicide compound is $M_1M_{2(1-r)}Si_s$;

M1 and M2 are both said at least one metal and are selected from said

group;

M1 is not M2;

r is in a range from 0 to 1; and

s is greater than zero.

36. (Twice Amended) The semiconductor structure as defined in Claim 32, wherein:

the metal silicide compound is M_xSi_y ; and

x is 1, and y is in a range from about 1.5 to about 5.

37. (Twice Amended) The semiconductor structure as defined in Claim 32, wherein the

antireflective coating further comprises hemispherical grained polysilicon.

38. (Twice Amended) The semiconductor structure as defined in Claim 32, wherein:

the antireflective coating has a film thickness; and

the antireflective coating is amorphous or has a grain size that is less than the film

thickness.

41. (Once Amended) A semiconductor structure comprising:

a semiconductor substrate; and

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an antireflective coating over the semiconductor substrate, the antireflective coating comprising a metal silicon nitride compound selected from the group consisting of tungsten aluminum silicon nitride, and titanium aluminum silicon nitride.

Sub CS B12
43. (Once Amended) A semiconductor structure comprising:

a semiconductor substrate; and

an antireflective coating over the semiconductor substrate and having a thickness range from about 25 Angstroms to about 200 Angstroms, the antireflective coating comprising a metal silicon nitride compound, wherein the metal is at least one metal selected from the group consisting of Sc, Co, Al, and Ni.
